

Distributed Energy System Application

Application for Interconnection

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee

A non-refundable processing fee of \$500 for a Distributed Energy System of 10 kW and under and \$1000 for a Distributed Energy System larger than 10 kW must accompany this Application.

Interconnection Customer

Name: _____

Contact Person: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ E-Mail Address: _____

Interconnection Company Contact

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

E-Mail Address: _____

Distributed Energy System Information

Location (if different from above): _____

Electric Service Company: Flint Hills Rural Electric

Cooperative Account Number: _____

Inverter Manufacturer: _____

The Member's Renewable Energy System shall be appropriately sized to the Member's anticipated electric load as follows:

Divide the member's historic consumption in kilowatt hours for the previous 12-month period by 8,760 and divide such quotient by a capacity factor of .288. If the Member does not have historic consumption data that adequately reflects the Member's consumption at such premises, the Member's historic consumption for the previous 12-month period shall be 7.15 kilowatt-hours per square foot of conditioned space; and round the amount determined pursuant to this section up to the nearest one kilowatt alternating current power increment.

Inverter Model: _____

Inverter Nameplate Rating in kW and AC volts: _____

Is the inverter single phase or three phase: _____

System design capacity (in AC): _____

Please Select Prime Mover (ie wind, solar): _____

Is this equipment UL1741 Listed: _____

Estimated Installation Date: _____

Estimated In-Service Date: _____

The small inverter process is available only for inverter-based Distributed Energy Systems that meet the codes, standards, and certification requirements as determined by Flint Hills REC after review of the design or has tested the proposed Distributed Energy System and is satisfied that it is safe to operate and meets the requirements of the Certification Codes and Standards document and the Certification Requirements document.

Provide a one-line diagram and a list of components of the Distributed Energy System equipment package that are currently certified:

Equipment Type:

[illegible]

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Interconnection Customer Signature:

I hereby certify that, to the best of my knowledge, the information provided in this Application is true.

Signed: _____

Title: _____

Date: _____

Contingent Approval to Interconnect the Distributed Energy System

(For Flint Hills Rural Electric Cooperative use only)

Interconnection of the Distributed Energy System is approved contingent upon the Terms and Conditions for Interconnecting a Distributed Energy System and return of the Certificate of Completion.

Company Signature: _____

Title: _____

Date:

Certification Codes and Standards

Certification and interconnection of Interconnection Customer's facilities with Electric Cooperative's Distribution System shall be governed by all applicable local, state, and federal statutes and regulations. In addition, Interconnection Customer's facilities shall be installed in accordance with all applicable provisions of the National Electrical Safety Code (ANSIC2), National Electrical Code (NFPA70), North American Electric Reliability Council (NERC) Standards, American National Standards Institute (ANSI) Standards, Institute of Electrical and Electronics Engineers (IEEE) Standards, or by any applicable statute, rule, order, provision, guide, or code of an organization, council, institute, regulatory or governing body having jurisdiction over such matters.

A sample list of such requirements is shown below. (Note: this list is not all-inclusive and the entities responsible for these requirements may update them at any time. The current versions shall be applicable.):

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

Certification of Small Generator Equipment Packages

- 1.0 Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in KS-SGIP Attachment 3, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.
- 2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.
- 3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.
- 4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.
- 5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.
- 6.0 An equipment package does not include equipment provided by the utility.
- 7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these small generator interconnection procedures shall be considered certified under these procedures for use in that state.